



NASA Procedural Requirements

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NASA Export Control Program

**Responsible Office: Export Control & Interagency Liaison
Division**

NASA Export Control Program Operations Manual

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Preface

P.1 Purpose

a. This NASA Procedural Requirements (NPR) document provides instructions and requirements for implementation of NASA Policy Directive (NPD) 2190.1 NASA Export Control Program. Specifically, this NPR provides requirements, instructions, and responsibilities for all NASA employees and NASA support contractors engaged in activities that involve the transfer of commodities, software, or technologies to foreign individuals or organizations. Such transfer activities are regulated by export control laws in order to protect the national security and to further U.S. foreign policy objectives. These are primarily codified in the U.S. Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR) that are administered by the Departments of Commerce and State, respectively. The NASA Export Control Program is a NASA-wide (Headquarters and Centers) system established to ensure that exports and transfers to foreign parties in the course of approved international activities are consistent with the EAR and ITAR. Most exports can proceed without prior specific written authorization, or "validated license," under various Exceptions, Exemptions, or Special Licensing Procedures. This NPR establishes criteria for fully qualifying for such Exceptions and Exemptions, as well as complying with export control requirements, generally.

b. The NASA Export Control Program is based on a "corporate" philosophy that says: "We want to maximize the benefits of our international efforts while ensuring that we comply with U.S. export control laws and regulations." This is the personal responsibility of each employee. It is a tangible expression of the Agency's statutory mandate and mission in the responsible pursuit of appropriate international activities involving transfers of technologies, software, and commodities. The Export Control Program (ECP) is the mechanism within the Agency that provides checks and safeguards at key steps in program development and implementation to help manage international activities. Absent an effective ECP, NASA and its employees risk running afoul of the EAR and ITAR, which may result in criminal, civil, or administrative enforcement actions against NASA, individual employees, and/or private contractors.

P.2 Applicability

a. This NPR is applicable to NASA Headquarters and NASA Centers, including Component Facilities and Technical and Service Support Centers. This language applies to the Jet Propulsion Laboratory (JPL), a Federally Funded Research and Development Center (FFRDC), other contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

b. In this directive, all mandatory actions (i.e., requirements) are denoted by statement containing the term "shall." The terms "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice and is recommended, but not required, "will" denotes expected outcome, and "are/is" denotes descriptive material.

P.3 Authority

NPD 2190.1, NASA Export Control Program.

P.4 Applicable Documents and Forms

- a. Export Administration Regulations, 15 C.F.R. pts. 730-774.
- b. International Traffic in Arms Regulations, 22 C.F.R. pts. 120-130.

P.5 Measurement/Verification

Adherence to this policy will be measured by whether exports are executed in a timely manner sufficient to meet NASA program objectives, by the extent to which NASA exports are compliant with U.S. laws and regulations, and by annual reviews conducted by the Center Export Control Auditors (ECA).

P.6 Cancellation

NPR 2190.1, NASA Export Control Program, dated April 10, 2003.

/S/

Michael F. O'Brien
Associate Administrator for
International and Interagency Relations

Chapter 1. Introduction

1.1 General

1.1.1 This NPR provides basic procedures and requirements for fulfilling NASA's obligation to comply with all U.S. export control laws and regulations in its transfers of commodities, software, or technologies to foreign parties (including foreign contractors) in the course of approved international activities. It is the responsibility of every NASA employee to comply with U.S. export control laws and regulations. The NASA Headquarters Export Administrator (HEA), the Associate Administrator for International and Interagency Relations, the NASA General Counsel, the Mission Directorate Associate Administrators and the Mission Support Associate and Assistant Administrators, the Headquarters' Officials-in-Charge, Center Directors, Center Chief Counsel, Center Export Administrators (CEAs), the Headquarters and Center Export Counsel (HEC/CECs), the NASA Program/Project Managers, the Contracting Officers (CO), the Grant Officers (GO), and Contracting Officers' Technical Representatives (COTR), and the Transportation Officers (TO) are the key personnel charged with ensuring NASA's adherence to those laws and regulations.

1.1.2 Questions regarding the execution of responsibilities set forth in this NPR are to be directed to the HEA. Suggestions for improvements in the content of this NPR are welcome and should be made in writing to the attention of the NASA HEA, Office of International and Interagency Relations, NASA Headquarters, Washington, DC 20546. A flow chart of the steps and considerations to be undertaken before implementing an export is found in the Export Processing Template at Appendix C.

Chapter 2. General Export Control Responsibilities for NASA Personnel

2.1 General

2.1.1 Exports or transfers of export-controlled items, including technical data and software, shall not be made to any foreign entity under any NASA program unless the exporter is confident that such exports or transfers are in conformity with approved contracts or agreements (usually international agreements) and U.S. export control laws and regulations, as delineated in the EAR and ITAR. Further, NASA exports to foreign entities will only be conducted in furtherance of NASA agreements or contracts and when there is a mission requirement. NASA publication of technical data and software are appropriate when effected in accordance with NASA policies. Consultation with the NASA HEA, appropriate CEA, or counsel is required whenever there is doubt as to whether a proposed export or transfer is consistent with this general principle.

2.1.2 Property disposal officials selling NASA export-controlled property to persons in the United States should ensure vetting of individuals to receive the items and provide notice to the recipient of the export-controlled status of the item. Vetting includes verifying U.S. citizenship and checking the Denied Persons List and Debarred Parties List.

2.1.3 NASA export control and international technology transfer policy is formulated by the Headquarters Office of International and Interagency Relations, and the program is administered by Headquarters through its network of CEAs.

2.2 NASA Headquarters Export Administrator (HEA)

2.2.1 The HEA is appointed by the Associate Administrator for International and Interagency Relations and is responsible for assessing and ensuring compliance of all NASA program activities and exports with U.S. export control laws and regulations. The HEA is also NASA's policy and licensing liaison with the U.S. Government's export control community. Specifically, the HEA shall:

- a. Maintain a high level of expertise of current EAR and ITAR provisions and requirements applicable to NASA programs.
- b. Approve and maintain necessary NASA licensing documents regarding specific exports pursuant to NASA programs that are subject to the EAR and ITAR. Coordinate and submit all Commodity Jurisdiction (CJ) requests, Advisory Opinions (AO), Voluntary Disclosures, General Correspondence (GC), export and reexport license applications, and classification requests.
- c. Serve as the NASA Headquarters point of contact for the Department of Commerce's (DoC) Bureau of Industry and Security (BIS), the Department of State's (DoS) Directorate of Defense Trade Controls (DTC or DDTC), the Department of Defense's (DoD) Defense Trade and Security Administration (DTSA) and Defense Threat Reduction Agency (DTRA), the Department of Homeland Security, the Department of Justice Federal Bureau of Investigation, and other appropriate agencies for all international technology transfer/export control issues.
- d. Manage NASA's annual ECP internal audits, including providing annual audit guidance to Centers, receiving, and reviewing audit reports. See Chapter 7: NASA Export Control Program

Auditing.

- e. Serve as NASA Headquarters point of contact for NASA Headquarters program executives, and work with the NASA CEA's concerning issues at Centers. Coordinate with appropriate NASA officials on export control matters affecting NASA programs. When the HEA, in consultation with these officials, determines that a proposed export or transfer would not be in conformance with the EAR or ITAR, the HEA has the authority to suspend such activity pending resolution with the concerned offices or agencies.
- f. Attend, at least annually, export control-related training and coordinate the annual NASA Export Control Program Conference. Provide additional periodic training to NASA Headquarters and Center officials, as requested or needed.
- g. Develop, in consultation with appropriate NASA offices and officials, the NASA position on missile technology proliferation issues, and participate in interagency organizations and meetings concerning missile technology transfers and proliferation as the NASA representative.
- h. Manage export control input to the NASA Identity Management System for access to NASA facilities by foreign persons.
- i. Obtain the participation of appropriate NASA offices and officials in training and in interagency reviews and assessments conducted by and with the Departments of State, Commerce, Defense, Treasury, and other appropriate agencies concerning technology transfers, export controls, missile technology proliferation, or other related matters affecting NASA programs.
- j. Ensure the completion and maintenance (recordkeeping) of necessary licensing and/or license exemption or exception documents regarding specific transfers, pursuant to Headquarters programs, which involve exports or transfers subject to the EAR or ITAR. For exports of defense articles under ITAR license exemptions, copies of all correspondence required by ITAR exemptions, will be maintained as required.
- k. Develop and issue export compliance policies and regulation interpretations for NASA to the CEAs.
- l. Support import activities for NASA programs. Initiate and coordinate discussions with other regulatory departments and agencies for the import of products in support of NASA programs.
- m. Review and concur on Headquarters program management designation of programs as fundamental research (see Appendix E, NASA Fundamental Research Designation Guidelines).
- n. Serve as the CEA for the NASA Management Office (NMO) at the JPL in the absence of a formally appointed CEA at the NMO and, otherwise, assist the NMO in administering the NASA/Caltech contract in the area of export control.
- o. Provide an export control review of NASA scientific and technical data prior to publication, and determine if the data should be export controlled. Participate in reviews of export-controlled data requested under the Freedom of Information Act (FOIA).

2.3 NASA Officials-in-Charge of Headquarters

2.3.1 The NASA Officials-in-Charge of Headquarters are responsible for ensuring that programs and projects within their organizations comply with all U.S. export control laws and regulations and the NASA ECP.

2.3.2 The NASA Officials-in-Charge of Headquarters should appoint a member of their staff to act

as the export control point of contact for the ECP. The export control point of contact will coordinate responses and provide a conduit for sharing the export control-related information.

2.4 NASA Headquarters Export Counsel (HEC)

2.4.1 The HEC is appointed by the General Counsel and is responsible for providing legal guidance to the HEA in NASA export control matters under, among others, the EAR and the ITAR. Specifically, the HEC shall:

- a. Assist the HEA in reviewing specific exports and transfers under NASA programs..
- b. Serve as the NASA Headquarters point of contact for the Center Export Counsel on legal matters.
- c. Assist the HEA with export control review and publication clearance for NASA patent applications.
- d. Keep abreast of statutory and regulatory developments in the U.S. export control system.

2.5 NASA Headquarters Program and Project Managers

2.5.1 NASA Headquarters program/project managers shall include export-control compliance planning and export-control milestones in programs with international partners and will maintain oversight of NASA-directed contractor export activities, including concurrence on the use of NASA-authorized Exemptions and use of NASA-obtained Individual Validated Licenses (IVL). Program and project managers can request, from NASA contractors, copies of Automated Export System (AES) filings and export licenses submitted in support of NASA programs. NASA use of ITAR exemptions or EAR exceptions requires the approval of the HEA and compliance with reporting and recordkeeping requirements. Specifically, program and project managers shall:

- a. Consult with HEA early in program development to determine the export-control classification of items and data and document that information in the program/project plans, in applicable property accountability records, and prior to releasing property to the Property Disposal Officer (PDO). Understanding export-control classification of items and technical data to ensure that export-control matters are considered and resolved in advance of prospective shipping or transfer dates is essential. Export-controlled technical data will be marked, as such, prior to transfer to international partners. Early collaboration with Export Administrators in a project life cycle (preferably prior to mission definition review) is essential to identify and assess export-controlled items and technical data that may require access by international partners.
- b. Ensure that programs with international partners under their direction include the responsibilities set forth in Sections 2.5.1a-h.
- c. Develop appropriate safeguards for commodities, technologies, and software exported or transferred pursuant to international agreements or contracts. All controlled technical data or commodities will be marked or identified in accordance with the Transfer of Goods and Technical Data Clause of the relevant international agreement or in accordance with the Transfer of Goods and Technical Data Clause of the relevant contract. When necessary and appropriate (and with the concurrence of the HEA and HEC), nondisclosure agreements may be used when foreign nationals are provided export-controlled technical data or commodities outside the scope of an international agreement or contract.
- d. Provide the necessary technical information to the HEA to determine the need for validated export licenses or other documentation in specific activities and for the completion of such documentation,

where necessary.

e. Document requirements for exports or transfers of technical data to foreign persons and ensure that requirements are reflected in relevant international agreements, contracts, or technology transfer control plans that support a program or project.

f. Develop a Technology Transfer Control Plan (TTCP). It is required when working with countries that are not members of NATO or are not major non-NATO allies. See Section 3.5 and Appendix D. A TTCP is recommended for all NASA programs and projects with international participation and can be referenced when hosting foreign persons at NASA facilities.

g. Require annual export-control training for program/project personnel working with foreign persons and directing the work of others on the project. All personnel shall participate in basic export control awareness training either via NASA's Systems for Administration, Training and Educational Resources for NASA (SATERN) or through on-site briefings or outside forums.

h. Work with the HEA to determine the export-control classification of NASA hardware prior to disposal of that hardware.

2.6 NASA Headquarters Manager, Transportation Programs

2.6. The NASA Headquarters Manager, Transportation Programs, shall, in consultation with the HEA, ensure that all exports and transfers of commodities, technologies, and software are accompanied by appropriate and accurate export-control documentation, including validated licenses (if required), marking statements, or other authorizing documents, as needed, as well as AES filings, Shippers Export Declarations (SEDs), and Government Bills of Lading (GBLs), in all appropriate cases. The manager will serve as the point of contact for the HEA on NASA transportation policies and practices.

2.7 Center Directors

2.7. Center Directors are responsible for ensuring that all projects under their purview comply with U.S. export control laws and regulations and this NPR. Center Directors shall appoint senior personnel as CEA and will ensure that the CEA's other responsibilities do not conflict with the duties of the CEA. The Center Directors will also designate a qualified individual as an Export Control Auditor (ECA) to annually review the operation of the NASA Export Control Program at that Center, in accordance with NPD 2190.1, NASA Export Control Program, and Chapter 7 of this NPR. Appointments of CEAs and ECAs should be reported to the HEA within 30 days.

2.8 Center Export Administrator (CEA)

2.8.1 The CEA is responsible for assessing and ensuring compliance of all Center program activities with U.S. export control laws and regulations. Specifically, the CEA shall:

a. Serve as the Center resident expert on all matters related to export control and international technology transfer and serve as the principal Center point of contact between the Centers and the HEA. CEA may establish a network of Export Control Representatives (ECR) or Center Export Representatives (CER) within Center directorates or programs to assist with export determinations and reviews.

b. Maintain a thorough knowledge of current EAR and ITAR provisions and requirements and all

relevant NASA NPD/NPR requirements applicable to Center programs and activities and assist in developing Center policy and procedures as appropriate.

c. Ensure the completion and maintenance (recordkeeping) of necessary licensing and/or license exemption or exception documents regarding specific transfers, pursuant to Center programs which involve exports or transfers subject to the EAR or ITAR. For exports of defense articles under ITAR license exemptions, provide copies of all correspondence to the HEA within 30 days of export.

d. Support and participate in the Center review process for approving foreign person visitors and hires, providing advice and guidance to the Center International Visit Coordinator and to the program and project personnel who serve as sponsors for such visitors and hires, and provide assistance in the development of appropriate TTCPs.

e. Assist, train, and oversee ECRs or CERs if appointed.

f. Assist program and project personnel in determining the appropriate export controls for publishing and disseminating scientific and technical information. CEAs, or their designated representative, are required to sign Block 8, Export Control Review/Confirmation, on NASA Scientific and Technical Document Availability Authorization (DAA). The signature may be on the hardcopy document or via the approved electronic DAA review system. CEAs participate in reviews of export-controlled data requested under the FOIA.

g. Assist Center COs, COTRs, and Grant Officers in procurement-related matters involving export control; e.g., responding to contractor export questions and requests, drafting of ITAR exemption authorizations and EAR exception authorizations for use by contractors, drafting of appropriate clauses in NASA solicitations and contracts, and reviewing NASA draft solicitations as requested. Review and concur on all Center designation of tasks as fundamental research (See Appendix E for requirements regarding fundamental research designation).

h. Assist the Center Chief Information Officer (CIO) in effecting NASA and local policy on placing information on NASA Web sites.

i. Assist the Center Software Release Authority in determining export control restrictions.

j. Coordinate with CECs, Transportation Officers, ECRs, and program/project managers, as appropriate, on export control matters affecting Center programs and activities. Advise Center Transportation Officers on questions related to international shipments (including imports of foreign-origin commodities). When the CEA, in consultation with these officials, determines that a proposed export or transfer would not be in conformance with NASA policy, the EAR or the ITAR, the CEA shall have the authority to suspend or stop such activity pending resolution with the concerned offices or agencies.

k. Attend the annual NASA Export Control Program Review and at least one other export control training session annually, establish an annual Center training plan for Center personnel, and arrange for, or provide, training.

l. Review and consult with the HEA on all Center commodity jurisdiction, classification, and licensing requests for Center projects. After local approval, route those requests to the HEA for formal transmittal to, and processing by, BIS or DTC.

m. Serve as the interface with the HEA for review and comment on contractor-requested export license applications related to NASA/Center programs/projects. The purpose of a review is to:

(1) Determine if the industry applicant is accurately representing the NASA program and NASA involvement.

- (2) Determine if the work is being done under a NASA international agreement or with an industrial contractor of the NASA foreign partner.
- (3) Determine if an exemption or exception applies for exports in accordance with an international agreement.
- (4) Verify that NASA contract direction to industry is within the scope of the license activities.
- (5) Determine any feedback or reporting requirements the program desires to add to the license conditions.
- n. Serve as the interface with the HEA for review and comment on the Committee on Foreign Investment in the United States (CFIUS) cases related to Center programs or NASA contracts.
- o. Serve as the Center export control point of contact for General Accountability Office (GAO) and Inspector General (IG) audits related to export control matters.
- p. Periodically disseminate export control information and guidance to appropriate Center personnel.
- q. Review and ensure Center followup and closeout on recommendations from the annual NASA Export Control Program audit and, as appropriate, on GAO and IG audits related to export control.
- r. Establish contacts with Center contractors involved in Center programs with international content to share information and to work issues related to licenses and/or granting or use of NASA-authorized ITAR exemptions.
- s. Assist the International Space Station (ISS) program and other NASA programs in performing EAR-required audits and reviews of NASA contractors authorized to use any BIS-approved NASA International Cooperative Licenses (ICL).
- t. Assist CEC with export control review and publication clearance for NASA patent applications.
- u. Assist project personnel in determining the export-control jurisdiction of items to be declared excess and support the PDO in conducting audits of Center property disposition and export control activities, as necessary.
- v. Maintain electronically, or in hardcopy, a reference library of relevant policies, regulations, and, to the maximum extent practicable, the international agreements governing the programs and projects for which exports and transfers are required.

2.9 Center Export Counsel (CEC)

2.9.1 The CEC is appointed by the Center Chief Counsel and is responsible for providing legal guidance to the CEA in NASA export control matters under the EAR, the ITAR, and other applicable regulations. The CEC shall:

- a. Assist the CEA in reviewing specific exports and transfers under NASA programs and with export control review and publication for NASA Patent Applications.
- b. Keep abreast of statutory and regulatory developments in the U.S. export control system.
- c. Guide the CEA in appropriate interpretation and implementation of export control laws and regulations. Consult with HEC to ensure Agency-wide consistency of interpretation.

2.10 Center Project Managers

2.10.1 NASA program and project managers shall include "export control milestones" in their program and project plans and should collaborate with CEAs early in a project's life cycle (prior to the mission definition review) to identify and assess export-controlled technical data that will be provided to foreign partners, and other activities as appropriate, to ensure that export control matters are considered and resolved in advance of shipping or transfer dates.

2.10.2 All NASA Center project managers shall, in consultation with the appropriate CEA, ensure that international activities under their direction include the following responsibilities:

- a. Provide appropriate safeguards for commodities, technologies, and software exported or transferred pursuant to international agreements or contracts. All export-controlled technical data or commodities will be marked or identified, in accordance with the Transfer of Goods and Technical Data Clause of the relevant international agreement, prior to authorized transfer to foreign persons. When necessary and appropriate (and with the concurrence of the CEA, HEA, HEC, and CEC), nondisclosure agreements may be used when foreign persons are provided controlled technical data or commodities outside the scope of an international agreement or contract.
- b. Provide necessary technical information to the CEA to determine the need for validated export licenses or other documentation in specific activities and for the completion of such documentation, where necessary.
- c. Provide adequate lead time for the submission, processing, and receipt of validated export licenses, when necessary.
- d. Maintain oversight of NASA-directed contractor export activities, including concurrence on the use of NASA-authorized exemptions and use of NASA-obtained IVLs, and require that copies of all export records (AES/SEDs, GBLs, waybills, invoices) be submitted to NASA. (See Section 3.7 Reporting)
- e. Ensure that NASA only transfers technical data (including software) and hardware necessary to fulfill NASA responsibilities under international agreements and contracts. If foreign contracts are anticipated, program and project managers shall ensure that there is appropriate Headquarters review and that such contracts are prepared with appropriate export control provisions. Contracts with U.S. industry that support an international program or project must also include appropriate provisions related to export control requirements.
- f. Determine the export-control jurisdiction and export classification of hardware and associated software and technical data, in consultation with the CEA, and note classification in NASA property databases or tracking forms. Export control jurisdiction of hardware and technical data is an important consideration when reviewing program access by non-U.S. persons. Technical data (documents) that require use of export license or exemption shall be marked as "export controlled."
- g. Designate work as fundamental research only in consultation with the CEA and CEC as described in Appendix E, NASA Fundamental Research Designation Guidelines.
- h. Provide annual opportunities for NASA export-control training for all program and project personnel; this is especially important if foreign persons are involved or when directing the work of others on the project. All personnel shall participate in basic export control awareness training either via SATERN or through on-site briefings.
- i. Assist in the timely review of industry export licenses related to NASA programs and projects. Verify program description and characterization of NASA and contractor involvement.
- j. Include an appropriate TTCP for programs with international partners that are not members or

nationals of NATO or major non-NATO countries and that include exports or transfers of controlled technical data. A TTCP is recommended for all NASA programs/projects with international involvement. (See Section 3.5 of this NPR for more information about TTCPs.)

k. Work with the CEA in determining the need for and subsequent appointment of an ECR in the program to provide assistance to a program/project manager with export control initiatives.

l. Determine the export classification of items, in consultation with the CEA or an export control representative, and document that information in the applicable property accountability record.

2.11 Export Control Representatives (ECR)

2.11 Centers may choose to appoint ECRs or CERs within a directorate organization or program to act as the point of contact with the CEA on all matters concerning export control and international visitor requests to the respective Center. The ECR will maintain working knowledge of the ITAR and EAR, participate in export control training activity annually, and coordinate export issues with the CEA. ECR duties and responsibilities related to export control issues shall be coordinated with the CEA.

2.12 Center Transportation Officers (TO)

2.12.1 NASA TOs at each Center shall, in consultation with the CEA, ensure that all exports and transfers of commodities, technologies, and software under Center programs are accompanied by appropriate and accurate export control documentation, including validated export licenses, marking statements, destination control statements, GBLs, AES filing, or other authorizing documents, as needed, as well as AES/SEDs in all appropriate cases.

2.12.2 Exports and transfers required by Headquarters program or project managers will be handled through the Goddard Space Flight Center (GSFC) TO. The GSFC TO shall consult with the GSFC CEA and the HEA, as appropriate, for such Headquarters exports and transfers.

2.13 Center Property Disposal Officers (PDO)

2.13 NASA PDOs shall ensure that the export-control jurisdiction of NASA hardware is determined prior to its disposal or sale. PDOs can consult with the NASA project manager/owner of the property, the CEA, or the Center ECR. NASA export-controlled property should ensure vetting of individuals to receive the items and notice to the recipient of the export-controlled status of the item. Vetting includes verifying U.S. citizenship and checking the Denied Persons List and Debarred Parties List.

Chapter 3. NASA Export Control Process

3.1 General

3.1.1 NASA, as a U.S. Government agency on the leading edge of technological development and international cooperation in space, aeronautics, and a variety of scientific endeavors, is a responsible exporter. The most significant step in any export activity is to determine if the export is necessary and appropriate, from a program standpoint, and in accordance with NASA international policy and with the approved agreement (usually international agreement) or contract. The international agreement's Roles and Responsibilities and Technical Data and Goods clauses provide important guidance on the scope of exports and transfers that are consistent with the relevant program.

3.1.2 In general, NASA is not responsible for contractors' export compliance in the execution of contracted work. The exception is an instance in which NASA directs or authorizes a contractor to effect exports using a NASA-obtained IVL or GBL.

3.2 Commodity Jurisdiction (CJ) and Classification

3.2.1 Once it has been determined that a planned transfer of commodities, technology, or software to a foreign person is necessary and consistent with NASA policy and the approved agreement or contract, the next step is to establish if the item is listed on the United States Munitions List (USML) or the Commerce Control List (CCL). The USML enumerates the classes of defense articles subject to the licensing authority of the DDTC. The CCL identifies items subject to the licensing authority of the BIS. NASA officials authorized to make this determination include the HEA, CEAs, and experienced ECRs and program and project managers. These individuals can seek advice from manufacturers, engineers, and other qualified, knowledgeable persons to assist in this process. The HEA can also request a CJ determination from DDTC if doubt about proper jurisdiction persists.

3.2.2 Upon a written CJ request from the HEA, DDTC will, in consultation with the DoD and DoC and other concerned U.S. Government agencies, provide a determination of whether a specific item is covered by the USML.

3.2.3 The ITAR states the basis upon which a commodity determination is made and how jurisdictional disputes may be resolved.

3.2.4 All CJ requests will come through Headquarters. NASA CEAs shall consult with the HEA if questions of jurisdiction arise.

3.2.5 If an item is believed to be under the jurisdiction of the EAR, but the exporter is not able to classify the item on the CCL, a classification request can be submitted to the BIS at the DoC.

3.2.6 All NASA classification requests are submitted by the HEA. A complete description of the item, including its intended purpose and all the capabilities the item may have, is required, as well as a suggested Export Control Classification Number (ECCN). BIS will provide a written classification to NASA, which may include limitations and requirement for reclassification if the item is modified or improved.

3.2.7 With the exception of publicly available technical data/technology or software, virtually all commodities, technical data, and software are subject to the export control regulations. If technology, technical data, or software is publicly available, the export or transfer may be made to any party (other than U.N.-embargoed countries) without a license; publicly available technology

and software are not subject to export control. Note: The ITAR states that the performance of defense services or technical assistance relating to any defense article to any foreign party, even when using exclusively publicly available information, is an activity subject to export control. (See 22 CFR § 124.1(a).)

3.2.8 If the item is not publicly available, it must be classified either under an ECCN on the CCL (See Chapter 4 of this NPR) or under Category Number on the USML, (See Chapter 5 of this NPR).

3.2.9 Once properly classified on the CCL or USML, it is relatively easy to determine the applicable IVL, license exception, or license exemption requirements for any export. Consultation with the CEA is required prior to use of license exemption or exception and recordkeeping, and reporting requirements apply.

3.3 Foreign Partner or End-User Credentials

3.3.1 In any export activity, it is imperative to know the intended end user. It is required that potential recipients (end users) be checked against the following lists to establish end-user (foreign partner or contractor) credentials prior to engaging in cooperative activity:

a. Check to ensure that the recipient is not:

(1) A Denied Person.

(2) A Specially Designated National.

(3) A Debarred Party.

(4) An Entity of Concern.

(5) An Unverified entity.

b. Normally, only publicly available information shall be provided to a recipient identified on the list given in Section 3.3.1a.

c. Ability to provide non-publicly available information is determined by requirements. An IVL, license exemption, or license exception may be required. Consultation with an HEA or CEA, as appropriate, is needed.

3.3.2 Check for red flags. Refer to BIS' Know Your Customer guidance and red flags in EAR. When red flags are raised by the information provided, NASA officials have a duty to check out suspicious circumstances and inquire about the end use, end user, or ultimate country of destination.

3.3.3 Encourage the maximum flow of information concerning the end use and end user. Do not inhibit the flow of information from potential foreign partners in an effort to prevent the discovery of adverse end use, end user, or country of destination. Such actions will not insulate NASA personnel from liability and will likely be considered an aggravating factor in enforcement proceedings.

3.3.4 Reevaluate any discoveries after inquiry. Inquiry and reevaluation are intended to determine whether there are explanations or justifications for discovered "red flags." If they can be justified, it is appropriate to proceed with the transfer or export. If they cannot be justified, proceeding with the transfer or export may place NASA personnel at risk of having had knowledge of a potential violation of the export control regulations.

3.3.5 Consult with the CEA, CEC, HEA, or HEC for guidance. If concerns remain about a particular

transfer or export, after inquiry and reevaluation, refrain from the transaction, provide all relevant information to the HEA or CEA, and await their determination. Information about proposed transfer/exports must be shared and evaluated by responsible individuals.

3.4 License Requirements

3.4. The procedures for determining license requirements are stated in Chapters 4 and 5 of this NPR for exports under EAR and ITAR jurisdictions, respectively. It is possible that certain exceptions and exemptions may apply that permit an export without the need of a license. These exceptions and exemptions are discussed in Sections 4.2 through 5.3.

3.5 Technology Transfer Control Plans (TTCP)

3.5.1 A TTCP is a document, intended to serve as an aid and a guide to program and project managers, as well as other NASA officials and contractors, involved in an international activity. The TTCP responds to four fundamental sets of questions that NASA officials and contractors working with foreign nationals in a NASA program or project should ask:

- a. What technologies, software, or hardware am I working with that are subject to export control?
- b. What foreign persons (and what nations) am I working with?
- c. What technologies, software, or hardware do I need to provide to those foreign persons, according to the agreement or contract governing this activity? Which technologies do I need to protect?
- d. How will I provide those export-controlled technologies, software, or hardware to those foreign persons with whom I am working? How will I protect export-controlled technologies, software, or hardware from unauthorized transfer?

3.5.2 If a NASA program or project will not export software or hardware and will disclose only publicly available information to all participating foreign persons, a TTCP would not be necessary or appropriate. However, if a NASA activity will export hardware or software, or will transfer or disclose export-controlled technology or software, to a foreign person who is not a national of a NATO member country or a major non-NATO ally country, then a TTCP is a required and useful tool to ensure that all persons participating in the activity understand what export-controlled items are involved, what foreign persons are involved, what export-controlled items NASA must provide to those foreign persons under the terms and conditions of the cooperation, and how those items will be transferred to those foreign persons (including the means of transfer and appropriate markings, as required by the governing international agreement or contract). A TTCP is recommended for all NASA international cooperation.

- a. NASA program and project managers should consult with their CEAs, or the HEA, in the development of TTCPs for their programs that involve foreign participation and exports. A sample TTCP is in Appendix D of this NPR. NASA program and project managers are also encouraged to consult with their Center Chief Patent Counsel, Software Release Authority, and the Innovative Technology Transfer Partnership (ITTP) Program when developing a TTCP.

3.6 Recordkeeping

3.6.1 All export control records shall be maintained and destroyed in accordance with NASA Records Retention Schedules. The CEA and HEA will keep relevant export license documents and

consult with individual programs and project managers on other export control records that should be maintained with the program or project.

3.6.2 The EAR requires that records be maintained for all exports or transfers of items on the CCL for a period of at least five years beyond the expiration date of the license. Records must also be maintained when using License Exceptions or EAR-99/NLR.

3.6.3 The ITAR likewise requires that records be maintained for all exports or transfers and imports of items on the USML for a period of five years from the expiration of the license. Records must also be maintained when using license exemptions.

3.6.4 The statute of limitations for criminal actions under the Export Administration Act (EAA) and the Arms Export Control Act (AECA) is five years. Therefore, all export control records must be retained for not less than five years after the transfer or expiration of the license. BIS, DTC, and the Department of Homeland Security may inspect records at any time. Records to be retained include the following in original or copy form:

- a. Shipping documents (e.g., GBL's and AES/SED's).
- b. Validated licenses.
- c. Letters to NASA contractors by COs or their representatives authorizing the use of export license exceptions or exemptions.
- d. Classification determinations by NASA, BIS, or DDTC.
- e. Records other than AES/SEDs regarding the use of export license exceptions or exemptions, where appropriate.

3.7 Reporting

3.7.1 When preparing statements of work and data deliverable requirements, program and project managers shall ensure that the following requirements are provided to the CO so that they may be included in solicitations, contracts, and grants:

- a. Requirement for a plan identifying export licenses required for performance and exemptions and exceptions that will be used.
- b. Requirement for a status report of licenses obtained, including copies of licenses.
- c. Requirement for a status report of exports effected against those licenses, including copies of AES/SEDs and other related shipping documents.
- d. Requirement that these reports will be delivered to the CO for distribution to the program or project manager, and to the CEA of the relevant NASA Center or the HEA at NASA Headquarters, as appropriate.

3.8 Information Security and Electronic Transmission

3.8. Ensure that the confidentiality and integrity of export-controlled information is protected during storage, processing, and transmission/dissemination. To the maximum extent practicable and when feasible, ensure that the confidentiality and integrity of export-controlled information exchanged over the Internet is properly protected by use of encryption.

Chapter 4. Export Administration Regulations (EAR) Procedures

4.1 General

4.1.1 In general, all dual-use items in the U.S. or moving in transit through the U.S. are subject to the EAR. An exception to this is those items that are exclusively controlled by other departments or agencies of the U.S. Government (such as the DoS for items subject to the ITAR) and such technology or software that are in the public domain. For more information and greater detail about the scope of these regulations, refer to the EAR.

4.1.2 Once it is determined that the item or activity is subject to the EAR, it must be classified according to the CCL, Supplement No.1, Part 774 of the EAR. The general characteristics of the item will determine its appropriate category. When the item has been classified into one of the categories, its particular characteristics and functions can be matched to a specific ECCN. The CCL contains 10 categories, 0 thru 9; each category is subdivided into five groups designated by letters A through E. The ECCN consists of a set of digits and a letter, as follows:

a. Each ECCN entry identifies the type of, and reason for, control associated with the item and under what conditions a License Exception may be granted. The first digit identifies the general category; the letter immediately following identifies under which of the five groups the item is listed. The second digit differentiates individual entries by identifying the type of controls associated with the items contained in the entry. The second or third digit serves to differentiate between multilateral and unilateral export controls. For example, in ECCN 9A004, the "9" represents "Propulsion Systems, Space Vehicles, and Related Equipment." The "A" represents "Systems, Equipment, and Components," and the "00" represents the reason for control as "National Security." The last digit, "4," represents the sequential location in the category.

b. If a commodity or technology under the jurisdiction of the EAR is not described under an ECCN on the CCL, it is designated "EAR-99," which describes items subject to the EAR, but not specifically listed on the CCL. Generally, EAR-99 items are controlled at the lowest level and could be exported without an IVL or specific License Exception to any destination except embargoed countries or countries designated by the Secretary of State as sponsors of terrorism.

c. If an item or technology is subject to the scope of the EAR, the "Ten General Prohibitions" listed in the EAR shall be considered to ensure that none of those prohibitions applies (e.g., exporting to prohibited end users on the List of Entities of Proliferation Concern in Supplement 4 to Part 744 of the EAR.)

4.1.3 Procedures for determining EAR license or License Exception eligibility are delineated in the following decision tree (Refer to Appendix C of this NPR):

a. Having consulted the CCL and classified the item to be exported under an ECCN, this decision tree will lead to a determination as to whether a license is required to export or reexport the item to specific destination. If applicable, check to see whether a valid export license currently exists for the proposed export, against which the export may be properly effected. 15 CFR § 738.4 gives more detailed guidance, as well as the Country Chart. Note: Publicly available technical data and software are generally exportable to all destinations.

b. Under the entry heading "License Requirements" on the CCL, in each ECCN Description, reasons

for control are identified. Also in each ECCN, certain CCL-based License Exceptions may be listed for that entry.

c. With each Reason for Control, there is an applicable Country Chart identifier noted. It is now necessary to consult the Country Chart, locate the country of destination, and determine whether an "X" is marked in the cell under any of the associated Reasons for Control. If no "X" appears in the relevant column for the destination country, then No License is Required (NLR), and the export may be effected by simply marking "NLR" on the AES/SED, once all appropriate screens (See Section 4.3 of this NPR) and red flags (See Section 3.3 of this NPR) above have been reviewed.

d. If an "X" appears in the relevant column for the country of destination, a license is required unless a License Exception applies (see License Exceptions, below). The appropriate application form for exports and transfers is BIS Form 748P. In some cases, if the export is not covered by an international agreement or contract with nontransfer/nondisclosure provisions, a Statement by the Ultimate Consignee, BIS Form 711, may be required, as enumerated in the EAR.

e. Refer all license requirements to the HEA through your CEA with other relevant license application information.

4.2 License Exceptions

4.2.1 A "License Exception" is an authorization that allows the export or reexport, under stated conditions, without an IVL. The EAR describes License Exceptions and provides detailed instructions for Exceptions and their restrictions. There are currently 17 EAR License Exceptions, 11 of which are discussed in Section 4.2.4, as they are the License Exceptions most commonly used by NASA.

Note: License Exceptions may not be used when the export is prohibited by a Denial Order; when the export would support proliferation activities; when the export would violate terms and conditions of an IVL or License Exception; or when the exporter has knowledge that a violation of law will occur in the export. Additionally, consistent with the policies and provisions of Export Administration Act, no License Exceptions may be used to export items controlled for Missile Technology (MT) reasons on the CCL.

4.2.2 Because most EAR License Exceptions require a written assurance by the recipient (e.g., BIS Form 711, Statement by Ultimate Consignee), an international agreement or contract is normally required for use of any License Exception.

4.2.3 Although License Exceptions permit the export of items without an IVL, there are requirements for filing AES/SEDs. Record the correct License Exception symbol and the correct ECCN (e.g., 4A003, 5A002) on the AES/SED entry for all shipments of items exported under a License Exception. Use of a License Exception requires approval of the CEA or HEA.

4.2.4 The following list represents the recommended sequence for reviewing some of the EAR License Exceptions most commonly used by NASA to determine whether an Exception may be used to effect an export. As soon as the exporter identifies an Exception that applies to her or his export, and for which all of the conditions of the Exception are met and no General Prohibitions apply, there is no need to attempt to find another applicable Exception. When considering a License Exception, you must read the entire description in the EAR. The list proceeds from least restrictive to most restrictive:

a. NLR: No License Required; applicable to commodities, software, and technology (See paragraph 4.2.3.).

- b. GOV: Exports consigned to and for the official use of the U.S. Government or any agency of a cooperating government; applicable to commodities, software, and technology.
- c. GBS: Exports of commodities controlled for National Security only to Country Group "B" (Free World"); requires "GBS-Yes" under ECCN on CCL
- d. RPL: One-for-one replacement parts for previously exported equipment; applicable to commodities and software only.
- e. LVS: Shipments of limited value. Single shipment exports of eligible commodities as identified by "LVS - \$(value limit)" on the CCL to destinations in Country Group B, provided the net value of the items included in the same order and controlled under the same ECCN entry on the CCL does not exceed the amount specified for LVS in that entry.
- f. CIV: Civil end users. Exports of commodities, software, and technology controlled for national security reasons only and identified by "CIV - Yes" on the CCL to former Communist Bloc countries, provided the items are destined to civil end users for civil end uses.
- g. APP: Exports of certain computers and "electronic assemblies" and specially designed components for consumption in Computer Tier countries.
- h. TSU: Exports of operation technology and software, software updates ("bug fixes"), mass market software, and publicly available encryption source code. Operation technology is the minimum technology necessary for the installation, operation, maintenance, and repair of items lawfully exported. If the operation technology takes the form of software code, it must be object code, not source code.
- i. TSR: Exports of technology and software controlled for national security reasons only and identified by TSR - Yes in entries on the CCL; provided, the software or technology is destined to Country Group B ("Free World").
- j. TMP: Temporary exports of commodities and software that are tools of trade; kits and replacement parts; exhibitions; inspections and calibrations; or Beta-test software. The commodities and software must be exported for less than one year and must remain under the effective control of the exporter.
- k. ENC: Exports and reexports of encryption items, controlled under specific ECCNs, to specific countries. There are review and reporting requirements that apply to certain exports using ENC.

4.3 Screens

4.3.1 Foreign partners and end users of NASA exports shall be screened for nuclear proliferation concerns, missile proliferation concerns, and chemical-biological proliferation concerns. Refer to the EAR for missile and nuclear screens and for destinations of chemical-biological weapons proliferation concern.

Chapter 5. International Traffic in Arms Regulations (ITAR) Procedures

5.1 General

5.1.1 In general, articles and services deemed to be defense articles and defense services, and so designated by the USML, are subject to the ITAR. Launch vehicles, spacecraft, and satellites are on the USML. Designations of defense articles are made by the DoS, with the concurrence of the DoD. For more information, refer to the ITAR.

5.1.2 The USML of the ITAR contains 21 generally described categories of controlled commodities, technical data, and services subject to the ITAR. Two categories particularly relevant to NASA activities are: Category IV-Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines; and Category XV-Spacecraft Systems and Associated Equipment.

5.1.3 Any person who engages in the United States in the business of either manufacturing or exporting defense articles or furnishing defense services is required to register with the DoS DDTC. Any person who intends to export or to import temporarily a defense article must obtain the approval of DDTC prior to the export or temporary import, unless the activity qualifies for an Exemption (See paragraph 5.3).

5.2 Imports

5.2. Notably, unlike the EAR, the ITAR contains provisions governing certain imports of defense articles, including IVL requirements and License Exemptions. In most cases, temporary imports of USML-listed defense articles by NASA are eligible for ITAR License Exemptions. Permanent imports by NASA of USML-listed defense articles are regulated by the Department of the Treasury, Bureau of Alcohol, Tobacco, and Firearms; such permanent imports do not require a license.

5.3 Procedures for Determining ITAR License Requirements and License Exemption Eligibility

5.3.1 Procedures are delineated in the following decision tree:

a. To determine items License Exemption eligibility under the ITAR, first classify the item on the USML and review the Exemptions listed below. If any Exemption applies, a license is not required, but the exporter may have to file a Shipper's Export Declaration (SED) or make an entry in AES and other documents, in accordance with the ITAR.

b. ITAR License Exemptions may not be used to export any items to Proscribed Countries or nationals of Proscribed Countries. Prohibitions may be due to United Nations Security Council embargoes, Secretary of State determination that certain countries have repeatedly provided support for acts of international terrorism, or whenever an export would not otherwise be in furtherance of world peace and the security and foreign policy of the United States. Comprehensive arms embargoes are normally published by the State Department in the Federal Register.

c. If an Exemption is not available for a proposed export, an ITAR export license must be obtained. DTC provides three ways to submit license requests, but electronic submission through D-Trade is

required for most license requests. The following forms are appropriate for items on the USML:

- (1) For temporary exports and transfers of unclassified items, use Form DSP-73, Application/License for Temporary Export of Unclassified Defense Article.
- (2) For permanent exports and transfers of unclassified items, use Form DSP-5, Application/License for Permanent Export of Unclassified Defense Articles and Related Unclassified Technical Data.
- (3) For exports and transfers of all classified items, use Form DSP-85, Application for Permanent/Temporary Export or Temporary Import of Classified Defense Articles and Related Classified Technical Data.
- (4) For temporary imports of unclassified items, use Form DSP-61, Application/License for Temporary Import of Unclassified Defense Articles.

5.3.2 All ITAR license requests and other relevant license application information must be sent through the CEA to the HEA at NASA Headquarters for submission of licenses.

5.4 License Exemptions

5.4.1 Numerous special conditions may exist that might permit the use of an ITAR License Exemption. Exemptions may apply due to the nature of the defense article or defense service, the destination, or the status of the exporting entity (i.e., U.S. Government agencies enjoy more permissive treatment under the ITAR than private companies). The details for Exemptions are found in the ITAR. Generally, any use of an ITAR License Exemption requires an international agreement or contract, as well as coordination with the CEA or HEA.

5.4.2 Following is a summary of License Exemptions found in the ITAR that are relevant to NASA activities:

a. Publicly Available Information about Defense Articles. May be used for exports of publicly available information about defense articles. This Exemption is applicable to information approved by NASA for public release in any form. It does not require that the information be published in order to qualify for the Exemption.

b. Technical Data Returned to Sender. May be used for exports of technical data being returned to the original source of import.

c. Exports by or for U.S. Government Agencies. Temporary import or temporary export of any defense article, including technical data or the performance of a defense service, by or for NASA:

(1) For NASA's official use or,

(2) For carrying out a NASA cooperative program.

(3) The Exemption applies only when all aspects of a transaction (export, carriage, and delivery abroad) are effected by a U.S. Government agency or when the export is covered by a GBL. DDTC approval must be obtained before defense articles previously exported pursuant to this Exemption are permanently transferred, unless the defense articles have been rendered useless for military purposes beyond the possibility of restoration. Note: For purposes of this Exemption, defense articles exported for incorporation into a foreign launch vehicle or for use on a foreign launch vehicle or satellite that is to be launched from a foreign country are permanent exports.

d. Imports and Exports for Use by U.S. Government agency abroad. Export or temporary import of defense articles, including technical data and performance of a defense service, for end use by a U.S.

Government agency in a foreign country, if:

(1) The export or temporary import is pursuant to a contract with NASA or NASA-written direction.

(2) The end user in the foreign country is a U.S. Government agency or facility, and the defense articles or technical data will not be transferred to any foreign person. (3) The urgency of the U.S. Government requirement is such that the appropriate export license or GBL could not have been obtained in a timely manner.

e. Operation Technical Data Exports for Lawfully Exported Articles. Exports of technical data in the form of basic operations, maintenance, and training information relating to a defense article lawfully exported or authorized for export to the same recipient.

f. Technical Data Exports Directed by NASA. Exports of technical data in furtherance of a contract between the exporter and NASA, where the contract provides for the export of the data and the data does not disclose the details of design, development, production, or manufacture of any defense article.

g. Plant Visits. Disclosures to Foreign Persons of unclassified technical data during the course of a plant visit approved by NASA, provided the technical data does not contain information in excess of that approved for disclosure and does not include information required for design, development, production, or manufacture of a defense article.

h. Exports of Parts, Components, and Models. Exports of parts and components when the total value does not exceed \$500 and parts are exported to support a defense article previously authorized for export, to a previously approved end user, and not to be used to enhance the capability of the defense article. Also permits export of unclassified models or mock ups of defense articles, provided they are inoperable, do not reveal any detailed design, development, production, or manufacturing technical data, and do not contain USML-listed components.

i. Canadian Exemption. Most temporary imports from (and subsequent reexports to) Canada of defense articles are eligible for this Exemption. Certain limited exports of defense articles and defense services to Canada and Canadian nationals are also permitted, subject to specific agreement and reporting requirements. This exemption specifically excludes items under Category XV of the ITAR.

j. Temporary Imports. Temporary import for up to four years (and subsequent reexport to sending country) of unclassified U.S.-origin defense items (and items manufactured abroad with U.S. Government approval) for items serviced, inspected, tested, calibrated, repaired, or imported for the purpose of exhibition in the U.S.

k. Technical Data Authorized by Written DTC Waiver. Exports of technical data for which the exporter, pursuant to an agreement with NASA, requires such exports, has been granted an Exemption in writing by DTC. This Exemption will normally be granted only if the arrangement directly implements an international agreement to which the United States is a party and if multiple exports are contemplated.

Chapter 6. NASA Export Control Program Education and Training

6.1 General

6.1.1 It is incumbent on the HEA and each CEA to maintain a working knowledge of current EAR and ITAR provisions and restrictions that are applicable to NASA programs. This includes:

- a. Receiving and reviewing appropriate publications for revisions to the EAR and ITAR.
- b. Attending at least one export control training seminar annually.

6.2 Training Program

6.2.1 The HEA and HEC shall establish and conduct an export control training program for CEAs, and CECs.

6.2.2 At least annually, the HEA shall conduct or arrange training for NASA officials, including CEA's, CEC's, program and project managers, TOs, and others on issues and developments in export controls that affect NASA's international activities.

6.2.3 The HEA shall consult periodically among CEAs, HECs, CECs, program and project managers, and other concerned NASA officials to determine where the NASA Export Control Program may be improved and whether additional comprehensive training is warranted.

6.2.4 The HEA shall maintain an on-line export control awareness-training module on the NASA SATERN site.

Chapter 7. NASA Export Control Program Auditing

7.1 Purpose

The purpose of the NASA Export Control Program Annual Audit is to ensure adequacy of the overall NASA Export Control Program and verify, via sampling, that required screening and licensing procedures are regularly followed and that required documents are maintained in compliance with the requirements of the EAR and the ITAR. This includes a review to ensure that appropriate records of all exports or transfers effected in support of NASA cooperative international programs are maintained in accordance with relevant regulations and NASA policies.

7.2 Auditor Selection

In accordance with NPD 2190.1, each Center Director shall designate a qualified individual as an ECA to annually review the operation of the NASA Export Control Program at that Center during the previous calendar year. The individual selected by the Center Director to serve as the Center ECA to perform the annual audit should have received audit training and have previous auditing or inspection experience. At a minimum, the appointed auditors should have participated in an ISO 9000 internal auditor course or other comparable auditor training. Individuals without appropriate training should not be selected, except in exceptional circumstances. The HEA will transmit audit guidance to each ECA in early January of each year. Therefore, Center Directors should make ECA appointments and inform the HEA of such appointments, as early in January of each year as practicable.

7.3 Auditor Duties and Responsibilities

7.3.1 Each Export Control Auditor (ECA) shall:

- a. Understand the tasks required in performing the audit (e.g., conducting interviews, random sampling of international projects conducted at the NASA Center, reviewing policy, reviewing export and shipping documents, developing recommendations, and preparing the final report).
- b. Have access to and a basic knowledge of the ITAR, EAR, and NASA Export Control Program.
- c. Be independent, motivated, and interested in performing the Export Control Auditor function.
- d. Be available to complete the task in the time allotted.
- e. Have complete access to the data and parties involved.
- f. Audit the Center export control function, including all export control activities and major programs that engage in exports.
- g. Determine if support contractors effecting NASA IVLs, or exporting at NASA direction, comply with the relevant regulations and recordkeeping requirements.
- h. Use the Audit Module developed each year by the HEA as a tool in conducting the audit, and review export-related files; examine Center documents for effecting exports under NASA obtained

export licenses; and examine a sampling of the documentation (e.g., AES/SEDs, and invoices) for other exports, paying particular attention to the items exported and the stated authority for the export.

i. Prepare an audit report to the Center Director and CEA that includes a description of the review process undertaken, the findings, and any recommendations or suggestions for improvement. The ECA's audit report shall be provided each year as directed by the HEA.

j. Maintain documentation supporting the audit performed.

7.4 Final Report

The CEA shall review the ECA's report and provide a written response, including concurrence, partial concurrence, or nonconcurrence with any findings and recommendations. The CEA will forward the final report, together with comments, recommendations, and actions taken or pending to the HEA 30 days from receipt of the final report each year.

Chapter 8. Questions of Compliance and Violations

8.1 General

NASA must be a responsible exporter. Noncompliance with U.S. export control laws and regulations and NASA's Export Control Program could result in schedule and cost overruns, criminal, civil, or administrative penalties against both Government officials and private contractors, and harm to the national security or foreign policy of the United States. It is every employee's responsibility to be aware of the export control laws and regulations and, whenever in doubt, to seek assistance when effecting transfers to foreign parties.

8.2 Voluntary Disclosure

8.2.1 Both the EAR and the ITAR require voluntary self disclosure if an exporter finds errors or noncompliance in export activities, even if errors were inadvertent. The voluntary disclosure of all the facts and circumstances will serve as a mitigating factor in determining what administrative sanctions or penalties will be sought. For voluntary disclosures to be considered a mitigating factor, they must be received by DTC (for ITAR violations), or the Office of Export Enforcement (for EAR violations), prior to the U.S. Government receiving similar information from another source and commencing an investigation or inquiry that involves that information. Refer to the ITAR and the EAR for specific guidance on voluntary disclosure processes at DTC and BIS.

8.2.2 Any NASA employee or NASA contractor concerned about questions of export compliance or impropriety in the area of export control should report those concerns to the CEA or CEC at the Center, or to the HEA or HEC at NASA Headquarters, in a timely manner. The appropriate CEA and HEA will immediately gather all the pertinent information, make an initial determination as to whether the subject activity should be suspended, review the facts, and determine if a voluntary disclosure is warranted. All NASA voluntary disclosures will be submitted to the appropriate U.S. Government regulatory and enforcement agencies through the HEA at NASA Headquarters' Office of International and Interagency Relations.

8.2.3 Errors in effecting exports or making transfers should not be concealed for any reason. It is better to uncover errors or mistakes, investigate, and understand the causes, and then make process changes to preclude future reoccurrence.

8.3 Violations

8.3.1 The ITAR lists U.S. criminal statutes that address violations of the ITAR. The EAR provides information on civil and criminal penalties for violations of the EAR.

8.3.2 All suspected criminal violations in the NASA Export Control Program are to be reported immediately to the HEA, who will consult with the IG and appropriate regulatory and enforcement agencies.

Appendix A. Definitions

AES or Automated Export System is the system used by U.S. exporters to electronically declare their international exports to U.S. Customs and Border Protection. Formerly, this declaration was only made by the Shipper's Export Declaration form.

AO or Advisory Opinion is a U.S. Department of State (DoS) term used to reference official DoS correspondence regarding export licensing regulations and policy issues.

BICE refers to the Bureau of Immigration and Customs Enforcement, a component of the U.S. Department of Homeland Security.

BIS refers to the Bureau of Industry and Security, a component of the U.S. Department of Commerce (DoC), which administers the Export Administration Regulations (EAR).

BIS 748P is the multipurpose application form for a license to export items or classify items subject to the licensing authority of BIS. Export license application forms are electronically submitted to BIS by the NASA Export Administrator at Headquarters.

CCL or Commerce Control List refers to a list that includes commodities, software, and technology subject to the authority of BIS. The CCL does not include those items exclusively controlled for export by another department or agency of the U.S. Government; e.g., DoS or Department of Energy (DoE). On the CCL, there are ten general categories of items; each category is subdivided into five descriptive groups, designated by letters A through E.

CEA or Center Export Administrator is the senior-level official appointed by the Center Director to implement and manage the NASA Export Control Program at each Center.

CEC or Center Export Counsel is the attorney appointed by the Center Chief Counsel to provide legal guidance to the CEA in NASA export control matters.

CFIUS or Committee on Foreign Investment in the United States is an interagency committee chaired by the Secretary of Treasury that implements the Exon-Florio foreign investment review legislation. CFIUS seeks to serve U.S. investment policy through thorough reviews that protect national security while maintaining the credibility of our open investment policy.

CIV is a CCL-based License Exception in the EAR, 15 CFR § 740.5. CIV authorizes exports and reexports controlled to the ultimate destination for national security reasons only, and if identified by "CIV Yes" on the CCL, provided the items are destined to civil end users for civil end uses in specified countries (generally, the nations of the former Soviet Union and certain other countries). Use of EAR Exceptions for exports must have the concurrence of the CEA or the HEA.

Classification is the process for determining the relevant entry in the CCL for commodities or technologies that fall under the jurisdiction of the EAR. Classification takes place after the jurisdiction of the item has been determined. Items under the jurisdiction of the EAR can be found on the CCL, and items under the jurisdiction of the DoS can be found on the USML. Individuals are responsible for correctly classifying items. However, NASA can request DoC assistance in classifying an item on the CCL. NASA classification requests must be coordinated with, and submitted by, the NASA HEA.

CJ or Commodity Jurisdiction refers to the DoS authority to determine if an article or service is under the jurisdiction of the DoS. A CJ may also be used for consideration of a redesignation of an article or service currently covered by the USML. NASA CJ requests must be coordinated with, and

submitted by, the HEA.

Commodity refers to an item, piece of hardware, software, or technical data.

Controls refers to possible reasons for export prohibitions or restrictions on a commodity, software, or technology. In the context of the EAR, reasons for export control include national security, foreign policy, antiterrorism, crime control, regional stability, international sanctions, and nonproliferation.

Consignee is a person, organization, or entity that is a recipient of an export.

Consignor is a person, organization, or entity that provides or effects an export.

DAA or NASA Scientific and Technical Document Availability Authorization refers to NASA Form 1676, used for all NASA-generated or -funded scientific and technical information that is to be released outside NASA. See NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information.

DCS or Destination Control Statement is a statement made by the exporter or consignor that must be entered on the invoice, and bill of lading, air waybill, or other export control document that accompanies the shipment to its ultimate consignee or end user abroad. In the absence of other prescriptions (See Section 1.2.40), and at a minimum, it should read: "These [item description] were exported from the United States in accordance with the [Export Administration Regulations] [International Traffic in Arms Regulations]. Diversion contrary to U.S. law is prohibited." The DCS relates directly to the "Marking Statement" which is discussed in NASA international agreements that provide for exports of items in NASA programs where, in most cases, the international agreement prescribes the content of the DCS.

Defense Service means the furnishing of assistance (including training) to foreign persons, whether in the United States or abroad, in the design, development, engineering, manufacture, production, assembly, testing, repair, maintenance, modification, operation, demilitarization, destruction, processing, or use of defense articles as defined in 22 CFR §120.6. See 22 CFR §120.9 for more descriptions of a defense service.

DSP-5 is the DoS application form for a license to permanently export unclassified defense articles and related unclassified technical data controlled by the ITAR and subject to the licensing authority of the DoS. Generally, NASA does not seek licenses for exports of technical data or defense services. All NASA export license applications are coordinated with and submitted by the HEA.

DTC or DDTC refers to the Directorate of Defense Trade Controls, a component of the DoS, which administers the ITAR.

Dual use is a term used to distinguish the types of items covered by the EAR from those that are covered by the ITAR. Dual use refers to items that have both a military and commercial application.

EAR or Export Administration Regulations, 15 CFR §§ 730-774, is the set of regulations that control the export of commercial and dual-use items that are designed for commercial use, but may have military use as well. The BIS within the DoC has the responsibility for the EAR under the Export Administration Act of 1979, as amended (50 U.S.C. app. §§ 2401, et seq.).

EAR-99 is an EAR classification used to describe an item (commodity, software, or technology) that is subject to the EAR, but that is not specifically identified on the CCL. EAR-99 indicates the lowest level of control and is eligible for export to most countries (excluding terrorist-supporting and embargoed nations), using the designation NLR. See 15 CFR § 740, Supp.1, Country Group E.

ECA or Export Control Auditor refers to NASA-appointed internal auditors that perform the annual

audit of NASA ECP.

ECCN or Export Control Classification Number is related to the classification process. On the CCL, there are ten categories of items, 0 through 9; each category is subdivided into five descriptive groups designated by letters A through E. The ECCN consists of a set of digits and a letter. The first digit identifies the general category (e.g., 9 - Propulsion Systems, Space Vehicles, and Related Equipment); the letter immediately following identifies in which of the five descriptive groups the item is listed (e.g., A - Equipment, Assemblies, and Components). The following digits differentiate individual entries by identifying the type of controls associated with the items contained in the entry (e.g., 0 - National Security reasons). The second and/or third digits serve to differentiate between multilateral and unilateral entries. Thus, in ECCN 9A004, the 9 represents Propulsion Systems, Space Vehicles, and Related Equipment; the A represents Systems, Equipment, and Components, and the 00 represents both the reason for control as National Security and is subject to multilateral control. The last digit, 4, simply represents the sequential location in the category.

ECP or Export Control Program refers to NASA Export Control Program and NPD 2190.1.

ECR or Export Control Representative is a civil servant in the Center Directorate or program organization that may be appointed as an Export Control Representative and is responsible for facilitating and coordinating resolution of export control issues with the CEA. The ECR maintains a working knowledge of the export control laws and regulations and can assist the Center Directorate or program with compliance and development of Technology Transfer Control Plans.

ENC is a License Exception under the EAR, 15 CFR § 740.17. ENC authorizes the export of certain encryption items and information security test, inspection, and production equipment. All requirements of the ENC Exception must be reviewed and complied with before its use can be authorized. Use of EAR Exceptions for exports must have the concurrence of the CEA or the HEA.

End User is the designated final entity and destination of the export indicated on an export license. The foreign government partner signatory to the international agreement or Memorandum of Understanding with NASA is usually the designated end user on a NASA export license application.

EPT or Export Processing Template is a helpful decision tree or flow chart to guide you through the export process. See Appendix C.

Exception is an EAR authorization that allows an export or reexport of an otherwise controlled item to proceed without a license, provided that certain specified conditions are met. Exception is a BIS term and applies only to items under the jurisdiction of the EAR. Use of Exceptions for exports must have the concurrence of the CEA or the HEA. See 15 CFR, Part 740 for a description of all EAR License Exceptions.

Exemption is an ITAR authorization from DTC for exports of unclassified defense articles and defense services without a license under certain specific provisions or limitations. Exemptions can be found in the ITAR. All conditions of an Exemption must be met before use is authorized. Use of Exemptions for exports must have the concurrence of the CEA or the HEA and there are recordkeeping and reporting requirement to HEA. See 22 CFR Parts 123, 125, and 126 for a description of the most relevant ITAR License Exemptions. NASA Federal Acquisition Regulation 1852.225-70 notes the requirement for a NASA letter authorizing contractor use of 125.4(b) (3).

Export is the transfer of anything to a foreign person or foreign destination by any means, anywhere, anytime. An export can be any shipment, mail, transfer, or transmission of commodities, technology, or software, regardless whether it occurs in the United States, overseas, or in space, including:

- a. Transfer to any person by physical, electronic, oral, or visual means, with the knowledge or intent that the items will be shipped, transferred, or transmitted outside of the United States.

- b. Disclosure of technical data to a foreign person by physical, electronic, oral, or visual means within or outside of the United States (disclosure to U.S. nationals representing foreign interests are not exports unless there is knowledge or reason to know that the technical data will be further disclosed to a foreign party).
- c. Transfer to a foreign country, embassy, or affiliate.
- d. Transfer of control over a satellite or instrument on-orbit.

Foreign Person, for purposes of export control regulation, is any person who is not a U.S. citizen, permanent resident alien, or Protected Individual of the United States (See 22 CFR § 120.16). Note: Under NASA security policies, a foreign national is any person who is not a U.S. citizen (See NPR 1620.1).

Foreign Visit refers to a visit by a foreign national or foreign entity representative to any NASA facility, including NASA Headquarters, NASA Centers, JPL, or other Component Facilities. NPR 1371.2 describes the procedures and guidelines for review and approval of all visits to NASA facilities by foreign persons.

Fundamental Research means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons. (National Security Decision Directive 189)

GBL or Government Bill of Lading is an accountable, U.S. Government form used to document and facilitate exports of commodities on behalf of the U.S. Government. When a GBL is used to effect an export, the U.S. Government agency authorizing the use of the GBL is the exporter.

GBS is a CCL-based License Exception in the EAR, 15 CFR § 740.4. GBS authorizes exports to most free-world countries of certain commodities controlled for national security reasons only. All requirements of the GBS Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must be coordinated with the CEA or the HEA.

GOV is a License Exception in the EAR, 15 CFR § 740.11. GOV authorizes exports to and from U.S. Government agencies or personnel. It also permits exports to certain foreign government agencies. All requirements of the GOV Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

HEA is the NASA Headquarters Export Administrator. The HEA is appointed by the Associate Administrator for International and Interagency Relations and is responsible for:

- a. Ensuring the compliance of all NASA program activities and exports with U.S. export control laws and regulations and this NPR.
- b. Serving as NASA's Empowered Official for purposes of 22 CFR § 120.25 and 15 CFR § 758.1(a), in certifying and approving all NASA export license applications.
- c. Serving as the Headquarters point of contact with CEAs.
- d. Serving as the Agency's interagency interface for export control matters with the DoS and DoC, and others as appropriate, for all export licensing matters.

HEC or Headquarters Export Counsel is the attorney appointed by the NASA General Counsel to

provide legal guidance to the HEA in NASA export control matters.

International Agreement refers to the approved agreement document between NASA and a foreign entity. An international agreement can take the form of a letter agreement, a Memorandum of Understanding, or similar instruments. Unless otherwise delegated by the Associate Administrator for International and Interagency Relations, international agreements are signed by authorized officials in the Office of International and Interagency Relations at NASA Headquarters. See NPD 1050.1.

ITAR or International Traffic in Arms Regulations is the set of regulations that control the export and temporary import of defense articles and services. The ITAR (22 CFR §§ 120-130) is promulgated under the authority of the Arms Export Control Act (22 USC §§ 2778, et seq.). The authority for these controls has been delegated to the Secretary of State by Executive Order 11958, as amended (42 Fed. Reg. 4311).

Item means commodities, software, and/or technology/technical data.

IVL is an Individual Validated License, which is an export license issued by the DoC or DoS. The DoS export license has a raised stamp and signature by the licensing officer, and the original license must be presented to Department of Homeland Security's Bureau of Immigration and Customs Enforcement (BICE) at the time of export. The DoC export license has no signature, and a copy can be presented to BICE at the time of export.

LVS is a CCL-based License Exemption in the EAR, 15 CFR § 740.3. LVS authorizes the export in a single shipment of eligible commodities of limited value where identified on the CCL. All requirements of the LVS Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

Major non-NATO Ally or MNNA is a designation given by the U. S. Government to close allies who have strategic working relationships with U.S. armed forces, but are not members of the North Atlantic Treaty Organization (NATO). Current MNNA countries are: Argentina, Australia, Bahrain, Egypt, Israel, Japan, Jordan, Kuwait, Morocco, New Zealand, Pakistan, Philippines, South Korea, and Thailand.

Marking or marking statement refers to the export control notice that NASA must place on export documents (i.e., GBL, notification for foreign recipient, inventory, or packing lists) for all exports of controlled commodities or technology. The international agreement governing the export will have a Technical Data and Goods Clause that indicates the marking statement requirement. It is important that all controlled technical data (including software) include a marking statement prior to transfer to the foreign party. A marking statement is similar to the Destination Control Statement (DCS) required in the EAR and discussed in DAA above. The typical marking statement for exports effected under international agreements would read, "This (item description) is subject to the export control laws and regulations of the United States of America and is being exported from the United States to (name of foreign recipient) in accordance with (cite international agreement or contract) and U.S. export laws and regulations and are to be used by (name of authorized foreign recipients) only for the purposes of fulfilling their responsibilities under (cite international agreement or contract) and shall not be retransferred to any other entity without the prior written permission of NASA."

NATO The North Atlantic Treaty Organization (NATO) is a military alliance that currently consists of 28 member states from North America and Europe. Current NATO members are: Albania, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Turkey, United Kingdom, and the United States.

NLR or no license required is an EAR term and is entered on the Shipper's Export Declaration (SED), certifying that no license is required to export the item. NLR is determined in the export classification process.

Publicly Available or "public domain" means information (including software) that is not subject to export control due to its unrestricted availability as follows: in open literature; available at any library to which the public has access; open seminar; fundamental basic and applied research where the resulting information is ordinarily published and shared broadly within the scientific community; educational information taught in catalog courses, including general scientific, mathematical, or engineering principles commonly taught in academic institutions; information contained in published patents or published patent applications; or basic marketing information on function or purpose or general system descriptions. It does not include research which is restricted for proprietary reasons, or which is subject to specific U.S. Government access and dissemination controls. Additionally, information or software which is proprietary to any party is not publicly available. Public Domain is a term similar to publicly available. The ITAR defines public domain in 22 CFR § 120.11. The EAR defines publicly available in 15 CFR Part 732.

Recordkeeping refers to the requirements for the maintenance of original records pertaining to export transactions for inspection by U.S. Government regulatory departments and agencies upon request. Recordkeeping requirements for the EAR are found at 15 CFR Part 762 and for the ITAR at 22 CFR Part 130.14 and reflected in NPR 1441.1 NASA Records Retention Schedules. Export records are to be kept for all exports 5 years beyond the expiration date of an export license or 5 years beyond use of a License Exception or Exemption.

Red Flag means any abnormal circumstance in a transaction that indicates that the export/transfer may be destined for an inappropriate end use, end user, or destination. Examples may include requests for items that are inconsistent with the needs of the partner/project, requests for equipment configurations that are incompatible with the stated destination (e.g., 120 volts in a country with 220 volts), or other apparent irregularities. Always inquire and seek additional information if red flags are indicated. Refer to the EAR 15 CFR Part 732, Supplement 3.

RPL is a License Exception in the EAR, 15 CFR § 740.10. RPL authorizes exports associated with one-for-one replacement of parts or servicing and replacement of equipment. All requirements of the RPL Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

SED or Shipper's Export Declaration, is a joint Bureau of the Census/International Trade Administration document used for compiling the official U.S. export statistics and administering the requirements of the Export Administration Act as provided for in the Foreign Trade Statistics Regulations (15 CFR Part 30) and the EAR (15 CFR Parts 768-799). The SED is filed by the exporter with the Bureau of Immigration and Customs Enforcement at the port of exit from the United States.

STI refers to Scientific and Technical Information, which consists of the collected set of facts, analyses, and conclusions resulting from scientific, technical, and related engineering research and development efforts, both basic and applied. Information published in policy documents, such as NASA directives and NASA Technical, Engineering, or Safety Standards, or information published as a result of mishap investigations, are not considered STI. See NPR 2200.2 for further information.

Source Code means a representation or expression of one or more processes that may be transformed by a programming system or language, such as BASIC, FORTRAN, C++, Ada, JAVA and SQL (NPR 2210.1) into executable form ("object code"). Source code is any collection of

statements or declarations written in some human-readable computer programming language.

Technical Assistance refers to defense service. A Technical Assistance Agreement is an ITAR licensing document required for the performance of a defense service or the disclosure of technical data.

Technical Data and Technology: Technical Data is an ITAR term, defined in the ITAR at 22 CFR § 120.10. It is defined as information required for the design, development, production, manufacture, assembly, operation, repair, testing, maintenance, or modification of a defense article identified on the USML. Technology is an EAR term, defined in the EAR at 15 CFR Part 772. It is defined as specific information necessary for the development, production, or use of a product. The information takes the form of technical data or technical assistance. Controlled technology is further described in the General Technology Note (15 CFR Part 774, Supp. 2). As with technical data, controlled technology does not include information which is publicly available. For the purposes of this NPR, the terms technical data and technology have the same meaning.

TMP is a License Exception in the EAR, 15 CFR § 740.9. TMP authorizes various temporary exports; exports of items temporarily in the United States; and exports of beta test software. All requirements of the TMP Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

TSR is a CCL-based License Exception in the EAR, 15 CFR § 740.6. TSR permits exports of technology and software controlled for national security reasons only where identified on the CCL, provided the software or technology is destined to a free-world country. (See Country Group B, Supplement No. 1 to 15 CFR Part 740.) A written assurance is normally required from the consignee before exporting under TSR. All requirements of the TSR Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

TSU is a License Exception in the EAR, 15 CFR § 740.13. TSU authorizes exports of operation technology and software; software updates (bug fixes); "mass market" software subject to the General Software Note (15 CFR Part 774, Supp. 2); and encryption source code (and corresponding object code) that would be considered publicly available under 15 CFR § 734.3(b) (3). All requirements of the TSU Exception must be reviewed and complied with before its use can be authorized. Use of Exceptions for exports must have the concurrence of the CEA or the HEA.

TTCP or Technology Transfer Control Plan defines what technologies or technical data in a NASA program or project requires protection and what foreign access is permissible. It also assigns ECP requirements and responsibilities for programs or projects with foreign national participation. NASA international program activities should have a TTCP to follow when they involve exports or transfers of controlled technical data or hardware to international partners/foreign parties who are neither members or nationals of NATO or major non-NATO countries. See Section 3.5 of this NPR.

USML or United States Munitions List identifies and enumerates classes of defense articles and defense services subject to the jurisdiction of the ITAR. The USML is found in the ITAR at 22 CFR, Part 121.

Voluntary Disclosure is self disclosure of possible violations of export provisions by persons, firms, or organizations engaged in international transactions. Disclosures of export violations are required to be filed under the ITAR and are strongly encouraged under the EAR. The HEA will file any such voluntary disclosures concerning possible NASA export control violations with the appropriate agency. All suspected criminal violations in the NASA ECP are to be reported immediately to the HEA who will consult with the Office of the Inspector General and appropriate regulatory and enforcement agencies. NASA support contractors implementing NASA programs should report

potential voluntary disclosure matters to the HEA in addition to taking other actions required under the EAR or ITAR.

Appendix B. References

- B.1 Arms Export Control Act, as amended, 22 U.S.C §§ 2778, et seq.
- B.2 Federal Information Security Management Act of 2002 (FISMA), 44 U.S.C. 3535.
- B.3 International Emergency Economic Powers Act, as amended, 50 U.S.C. §§ 1701 et seq.
- B.4 Export Administration Act, as amended, 50 U.S.C §§ 2401 et seq.
- B.5 Exon-Florio Act, as amended, 50 U.S.C. app. § 2170.
- B.6 Foreign Contracts and International Agreements Clearances, 48 C.F.R. subpt. 1825.70.
- B.7 Export Control, 48 C.F.R. subpt. 1825.1103-70.
- B.8 Final Scientific and Technical Reports, 48 C.F.R. subpt. 1852.235-73.
- B.9 Major Breach of Safety and Security Reporting, 48 C.F.R. subpt. 1852.223-75.
- B.10 NPD 1051.1, Authority to Enter into Space Act Agreements.
- B.11 NPD 1360.2, Initiation and Development of International Cooperation in Space and Aeronautics Programs.
- B.12 NPD 1370.1, Reimbursable Utilization of NASA Facilities by Foreign Entities and Foreign-Sponsored Research.
- B.13 NPD 1371.5, Coordination and Authorization of Access by Foreign Nationals and Foreign Representatives to NASA.
- B.14 NPD 1440.6, NASA Records Management.
- B.15 NID 1600-95, NASA Identity and Credential Management.
- B.16 NPR 1600.1 NASA Security Program Procedural Requirements.
- B. 17 NPD 1600.2, NASA Security Policy.
- B.18 NPR 1620.3, Physical Security Requirements for NASA Facilities and Property.
- B.19 NPD 2110.1, Foreign Access to NASA Technology Transfer Materials.
- B.20 NPD 2190, NASA Export Control Program
- B.21 NPD 2200.1, Management of NASA Scientific and Technical Information.
- B.22 NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information.
- B.23 NPD 2800.1, Managing Information Technology.
- B.24 NPR 2800.1, Managing Information Technology.
- B.25 NPD 2810.1, NASA Information Security Policy.
- B.26 NPR 2810.1, Security of Information Technology.

B.27 NPR 4200.1, NASA Equipment Management Procedural Requirements.

B.28 NPD 4200.1, Equipment Management.

B.29 NPR 4300.1, NASA Personal Property Disposal Procedural Requirements.

B.30 NPR 5800.1, Grant and Cooperative Agreement Handbook (14 CFR 1260).

B.31 NPR 6200.1, NASA Transportation and General Traffic Management.

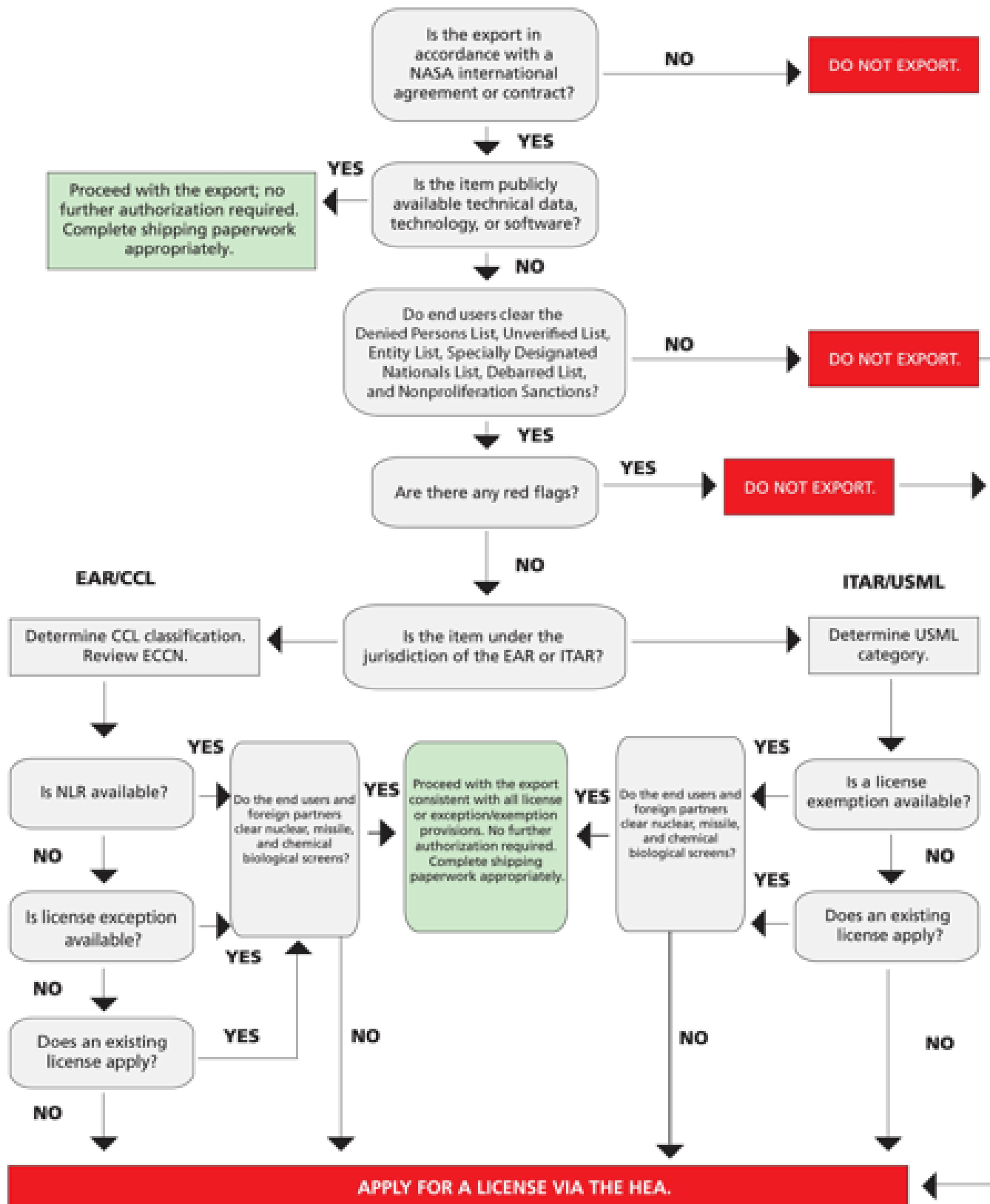
B.32 NPR 7120.5, NASA Space Flight Program and Project Management Requirements.

B.33 NPR 7500.1, NASA Technology Commercialization Process.

B.34 NAI 1050-1, NASA Advisory Implementing Instruction, Space Act Agreements Guide.

B.35 Grant Information Circular GIC 07-02, Scientific and Technical Information, April 5, 2007.

Appendix C. Export Processing Template (EPT)



Appendix D. Sample Technology Transfer Control Plan (TTCP)

Name of Project: Extreme X-ray Probe of Radiation Traits (EXPORT), Managed by GSFC Program Office Radiation under the Science Mission Directorate.

Implementing Contractor(s): JPL (an FFRDC); List Them Inc., and Another One, Ltd.

Name of Agreement: NASA-ESA EXPORT MOU, signed February 29, 2000.

Foreign Person Participants in Project:

1. Andreas Wilk (ESA, Germany).
2. Jean-Max Gross (CNES, France).
3. Diana Marx (ASI, Italy).

Export-Controlled Items (i.e., Technologies, Software, or Hardware) Involved in Project:

1. Space-qualified cryocoolers, USML Category XV(e).
2. Blueprints and Operator's manual for space-qualified cryocoolers, USML Category XV(f).
3. Software source code and object code for operation of space-qualified cryocoolers, USML Category XV(f).
4. Laser diagnostic equipment, CCL ECCN 6A005.
5. Blueprints and Operator's Manual for laser diagnostic equipment, CCL ECCN 6E001 and 6E201.

Export-Controlled Items Which NASA is Required to Provide to Above-Listed Foreign Nationals per Governing Agreement or Contract: Include design review meetings with Foreign Person Participants:

1. Permanent export; will be integrated onto ESA's EXPORT spacecraft.
2. Operator's manual for space-qualified cryocoolers, USML Category XV(f) -Temporary export.
3. Software object code for operation of space-qualified cryocoolers, USML Category XV(f) -Permanent export.
4. Laser diagnostic equipment, CCL ECCN 6A005 -Temporary export.
5. Operator's manual for laser diagnostic equipment, CCL ECCN 6E201 -Temporary export.
6. Technical data related to integration of the cryocoolers into the payload.

Means of Export or Transfer:

1. NASA will need to obtain an export license from the DoS for the export of the cryocoolers to ESA's offices in Noordwijk, the Netherlands. IVL application should be made no later than

September 1, 2003; export required by April 1, 2004; launch October 31, 2004.

2. NASA will direct JPL (an FFRDC), via task order, to export the cryocooler operator's manual to the Netherlands, under ITAR Exemption 125.4(b)(3). The manual must be marked as export controlled, with notice against retransfer, as required by the MOU.
3. Likewise, NASA will direct JPL (an FFRDC), via task order, to export the operation code for the cryocooler to the Netherlands, under ITAR Exemption 125.4(b)(3). The code must also be marked as export controlled, with notice against retransfer, as required by the MOU.
4. Neither NASA nor JPL (an FFRDC) requires an IVL to export the laser diagnostic equipment to the Netherlands. The equipment will be exported under NLR, but must be identified in air waybills and other shipping documents as export controlled, with notice against retransfer, as required by the MOU.
5. Neither NASA nor JPL (an FFRDC) requires an IVL to export the operator's manual for the laser diagnostic equipment to the Netherlands. The manual will be exported under NLR, but must be marked as export controlled, with notice against retransfer, as required by the MOU.
6. JPL (an FFRDC) and other support contractors will apply for Technical Assistance Agreements as required to support this activity.
7. The NASA International Desk Officer will generate a Duty Free Import Certification letter for items coming into the United States.
8. Program personnel will enter foreign person attendees at NASA facilities into the NASA Identity Management System for access at least 20 days before access is required.
9. Publications, documents, and briefings resulting from this activity will be reviewed in accordance with NPR 2200.2 prior to presentation or publication.

Approved:

Project Manager or Designee.

Reviewed/Concur:

Center Export Administrator or Designee.

Appendix E. NASA Fundamental Research Designation Guidelines

E.1. Summary

E.1.1 The fundamental research designation applies to information, not hardware, and could encompass an entire program or an element of a program.

E.1.2 NASA sponsors fundamental research at Federal laboratories, at universities, and within industry. This guideline is to be followed by NASA program managers to determine when research sponsored by NASA will be designated as fundamental research, allowing the public dissemination of results. Reference to NASA program managers in this document also includes NASA project managers that have authority to commit NASA resources to a course of action (i.e., grant or contract). JPL (an FFRDC) implementation of this guidance will be done as directed by the NASA Management Office (NMO) Procurement Officer at JPL-FFRDC. This guidance does not eliminate exemptions in the ITAR specifically for fundamental research at accredited institutions of higher learning in the U.S.

E.1.3 The National Aeronautics and Space Act of 1958 established NASA and charged it to "provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof." Programs designated as conducting fundamental research are expected to fulfill this charge and will have limited review for export control beyond the initial designation review. This limited review refers to the process program managers establish to ensure that export-controlled background or resource data is not co-mingled with fundamental research results data in publications. Release of NASA scientific and technical information from programs not designated as fundamental research will be handled in accordance with NPR 2200.2, Requirements for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information (STI), and will require an export control review by the appropriate NASA Export Control official before such information is released.

E.1.4 A copy of the documentation that designates a program or project as fundamental research must be forwarded to the Center's STI Program (STI Manager) who will alert the Center's Document Availability Authorization, NF 1676, representative. This documentation will include an approved NF 1676 designating the program/project as fundamental research, and sufficient description of the program or project for the reviewers of the NF 1676 to evaluate potential export issues. In addition, NASA STI from these programs or projects designated as fundamental research must be sent through the Center's STI process via the NF 1676, with the blanket authorization checked, prior to release or providing access to non-U.S. persons (foreign persons). STI not designated as fundamental research will be handled in accordance with NPR 2200.2, and will require full NF-1676 review, including an export control review by the appropriate NASA Export Control official before such information is released.

E.1.5 NASA program managers will coordinate with the local NASA/Center Export Administrator on the designation of a program as fundamental research, and JPL (an FFRDC) is required to coordinate with the Export Officer in the NMO. The designation criteria track the fundamental research definitions presented within the ITAR and EAR with the additional considerations detailed in this policy. Center designations of programs as fundamental research will also be coordinated with the appropriate HQ Mission Directorate to ensure consistency. Maintaining documentation of fundamental research program designations will assist authors and simplify the review of future

publications and other releases into the public domain. The program manager making the fundamental research designation and the Export Administrator consulted will keep a copy of the documentation to facilitate future NASA STI reviews and to support approval of blanket dissemination authority. NASA program management fundamental research designations impact NASA grants and contracts (NFS 1852.235-73, 52.227-14).

E.2 Defining Fundamental Research by the Regulations

E.2.1 The basic definition of fundamental research is the same under the ITAR and the EAR. There are some differences in how fundamental research is treated under the two sets of regulations. For instance, it is suggested that in order for fundamental research to be exempted from export controls under the ITAR, it must be performed by an institution of higher learning in the U.S. while under the EAR, universities, Federally Funded Research and Development Centers (FFRDC), and even private corporations and Federal agencies may perform fundamental research.

E.2.2 Fundamental research is defined by the ITAR in 22 CFR 120.11: Public domain means information which is published and which is generally accessible or available to the public: Through fundamental research in science and engineering at accredited institutions of higher learning in the U.S. where the resulting information is ordinarily published and shared broadly in the scientific community. Fundamental research is defined to mean basic and applied research in science and engineering where the resulting information is ordinarily published and shared broadly within the scientific community, as distinguished from research the results of which are restricted for proprietary reasons or specific U.S. Government access and dissemination controls. University research will not be considered fundamental research if: (i) The university or its researchers accept other restrictions on publication of scientific and technical information resulting from the project or activity, or (ii) The research is funded by the U.S. Government and specific access and dissemination controls protecting information resulting from the research are applicable.

E.2.3 Basic research (as defined in ITAR §125.4(c)(3) and § 126.5(c)(6)(iii)) means a systemic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and observable facts without specific applications towards processes or products in mind. Basic research does not include applied research. Applied research (also defined in sections referenced) is systemic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met. It is the systemic application of knowledge toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements.

E.2.4 The EAR provides a similar discussion of fundamental research in 15 CFR 734.8. Fundamental research is distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which are usually restricted for proprietary reasons or national security reasons defined in 734.11(b). The EAR also posits, in 734.8(c), that research conducted by scientists or engineers working for a Federal agency or a FFRDC may be designated as fundamental research within any appropriate system devised by the agency or the FFRDC to control the release of information by such scientists and engineers.

E.3 Consideration Factors for Fundamental Research Designation

E.3.1 National Security Decision Directive (NSDD) 189- National Policy on Transfer of Scientific, Technical, and Engineering Information; and Executive Order 12958 (Classified National Security Information) controls include:

- a. Prepublication review by the Government with the right to withhold permission for publication.

b. Restrictions on prepublication dissemination of information to non-U.S. citizens or other categories of persons.

c. Restrictions on participation of non-U.S. citizens or other categories of persons in the research.

E.3.2 National security considerations are to be guided by NPR 1600.1, NASA Security Program Procedural Requirements, specifically section 5.23, Security Classification Reviews for NASA Programs and Projects, which requires that programs and projects conduct formal security reviews to include reviews for traditional information classification security needs to determine if information used or produced as part of a program or project meets the requirements for designation as Classified National Security Information (CNSI) and/or Sensitive But Unclassified (SBU) controlled information. NASA Form 1733 can assist program managers' review of projects for national security concerns.

E.3.3 Information that is SBU is official information and material of a sensitive, but unclassified, nature, which does not contain CNSI. It includes any information, the loss or release of which would cause harm to a person's privacy or welfare, adversely impact economic or industrial institutions, or compromise programs or operations essential to the safeguarding of our national interests. Refer to NASA Interim Directive: 5.24 Sensitive But Unclassified (SBU) Controlled Information, NM 1600-55, for additional SBU guidance. Some examples of SBU are drawings and specifications for existing or proposed essential mission infrastructure.

E.3.4 The essential criterion for a fundamental research designation is whether the sponsor NASA intends for the results of the research is to be widely disseminated without restriction. Guiding considerations are provided for NASA program managers making such decisions; other factors or issues may be added as appropriate. In order to make an informed fundamental research designation decision for a program, program managers need an understanding of:

- a. The research area.
- b. The factors contributing to the research.
- c. The export classification or jurisdiction of the technology and/or hardware involved.
- d. The National Security-required control.
- e. The export-control access limitations that may be present.

E.3.5 Examples of areas of research with potential to receive NASA designation as fundamental research include: solar system science, planetary physics, astrophysics, astrobiology, heliophysics, Earth sciences, Earth and planetary environmental phenomena, space biological and physical sciences, and development of software tools and databases to capture, catalogue, refine, and interpret results data. The NASA fundamental research designation can also include applied research (also defined in §125.4(c)(3)). As with any fundamental research activity, the resulting information obtained through fundamental research involving the item must be published and shared broadly within the scientific community, and the information may not be restricted for proprietary reasons or specific U.S. Government access and dissemination controls or other restrictions accepted by the institution or its researchers on publication of scientific and technical information resulting from the project or activity. Export controlled or proprietary technical data used as background to fundamental research cannot normally be included in the resulting publication; grant recipients and contractors should ensure such disclosure is not made. NASA program managers should establish a mechanism to preclude inclusion of export controlled or proprietary data in fundamental research publications.

E.3.6 Generally, if research requires access to export-controlled technology, it may not be designated as fundamental research without further discussion between the subject matter experts, a NASA Export Control Administrator, and an Office of Protective Services representative to determine if a fundamental research designation is appropriate. A NASA program may not be designated as fundamental research if there are existing specific national security controls on a research project or activity within the program. Fundamental research cannot be SBU and vice versa.

E.3.7 An assessment of the Technology Readiness Level (TRL) or maturity of a particular technology or research area can also support the fundamental research designation of a program/project. A TRL of 5 and above generally would not support a fundamental research designation and will require coordination with NASA Export officials. Additional information on TRL levels can be found in NPR 7123.1, NASA Systems Engineering Processes and Requirements.

E.3.8 The questions below are intended to help the program manager and CEA work through the fundamental research decision process.

1. Does NASA intend for all the resulting data to be published and widely disseminated?

If the answer is "no," stop. Your project is not fundamental research. If the answer is "yes," review the considerations to clarify and support a fundamental research designation.

2. What is the current export classification of the research area, technology, software, or hardware involved?

The answer will guide further discussion. If the technology or hardware, as it currently exists, includes export controlled technical data, fundamental research classification for future research may not be appropriate and further discussion is required.

3. Is the proposed fundamental research related to any export controlled technology or hardware? Are there foreign national access limitations to export controlled hardware or technical data required in the fundamental research?

A "yes" answer may preclude a project from being designated as fundamental research, and further discussion is needed.

4. Will access to export controlled technical data, proprietary data, or systems be required for the research?

A "yes" answer may preclude research from being designated as fundamental research. If research is designated as fundamental research, it will require safeguards to preclude any co-mingling of export-controlled and proprietary data with results data. Program managers should have a mechanism in place to ensure that neither export controlled nor proprietary data are included in the published results.

5. Could the results be categorized as SBU? Could the results data adversely impact NASA or NASA assets, or compromise programs or operations essential to the safeguarding of our national interests? Refer to NPR 1600.1, NASA Interim Directive: 5.24 Sensitive But Unclassified (SBU) Controlled Information, NM 1600-55, and NSDD 189.

A "yes" answer precludes the project from being designated as fundamental research.

6. Could the results be categorized as proprietary and or include proprietary information provided by NASA or another source?

A "yes" answer precludes research from being designated as fundamental research.

7. Would publishing the expected research data generate National Security concerns? Refer to NPR 1600.1 and NSDD 189.

A "yes" answer precludes research from being designated as fundamental research.

8. Will there be intellectual property issues connected to the results of the research?

A "yes" answer will require compliance with 734.8(b)(2) and safeguards to preclude co-mingling of proprietary data with results data. Proprietary data requires General Counsel review. Research papers will not include proprietary and export-controlled background data.

E.4 Document the Fundamental Research Designation Decision

(Attach a document (containing the information below) to the NF 1676 that approves the blanket authorization for fundamental research. Submit this form along with the NF 1676 (called the master NF 1676) with all required signatures as indicated on the form and send it to the recipients listed in item 5. Subsequent documents processed under this approved Fundamental Research Designation Decision and master NF 1676 must be submitted via a NF 1676 with only the signature of the program manager who approved the designation and the Center DAA representative.)

Program Description (technology, organizations participating):

Will export controlled data be used in background? Yes ____, No _____. If NO, skip this section. If YES, indicate how the export controlled hardware or data will be protected and restricted from foreign person participants in the research and how program manager review of publications to preclude co-mingling of export controlled data will be accomplished:

Designation as fundamental research (supporting justification why it fits, when publications are expected):

Concurrence (NASA Program Manager, CEA, others as required), date:

Forward a copy, affixed to the completed NASA Form 1676, to:

- a. The CEA.
- b. The Center Records Manager.
- c. NASA Export Administrator at NASA HQ, Office of International and Interagency Relations.
- d. The HQ Mission Directorate.
- e. The Center for AeroSpace Information (CASI).
- f. The Center STI Manager who will alert the Center DAA, NF 1676 representative.